

WHAT IS CLAIMED IS:

1. A valve system for an OHV four-cylinder internal combustion engine, said engine including a pair of cylinder banks disposed symmetrically on opposite sides of an imaginary line orthogonal to an axis line of a crankshaft, wherein each of said cylinder banks includes a crankcase portion for rotatably supporting said crankshaft, a cylinder block portion on an outside of said crankcase portion, and a cylinder head portion on the outside of said cylinder block portion, and said cylinder head portions enclose respective combustion chambers, said valve system comprising:

a plurality of intake and exhaust valves for opening and closing intake and exhaust ports of said combustion chambers being provided at said cylinder head portions;

a plurality of valve camshafts operating in connection with said crankshaft, said valve camshafts being rotatably supported at said crankcase portions;

a plurality of valve-operating members for operating said intake and exhaust valves; and

a plurality of oscillating arms operating in connection with said valve camshafts being connected with said valve-operating members through pull rods disposed respectively on lateral sides of said cylinder banks.

2. The valve system according to claim 1, wherein said valve camshafts include at least one intake valve camshaft and at least one exhaust valve camshaft.

3. The valve system according to claim 2, wherein said intake and said exhaust valve camshafts are disposed respectively on both sides of said crankcase portions with said crankshaft therebetween.

4. The valve system according to claim 1, wherein said oscillating arms operating in connection with said valve camshafts and said valve-operating members for operating said intake and exhaust valves are respectively connected to each other through said pull rods disposed on both sides of said cylinder banks.

5. The valve system according to claim 3, wherein said oscillating arms operating in connection with said valve camshafts and said valve-operating members for operating said intake and exhaust valves are respectively connected to each other through said pull rods disposed on both sides of said cylinder banks.

6. The valve system according to claim 1, wherein said engine is a horizontally opposed, four valve-internal combustion engine.

7. The valve system according to claim 1, wherein said engine is a V-block internal combustion engine.

8. The valve system according to claim 1, further comprising a plurality of valve springs, said intake and exhaust valves being energized in a closing direction by said valve springs.

9. The valve system according to claim 3, further comprising a timing gear mechanism, said valve camshafts being rotationally driven by the crankshaft through said timing gear mechanism.

10. A valve system for an internal combustion engine including at least a pair of cylinder banks and a crankshaft, wherein each of said cylinder banks includes a crankcase portion for rotatably supporting said crankshaft, a cylinder block on an outside of said crankcase portion, and a cylinder head portion on the outside of said cylinder block portion, said cylinder head portions enclosing respective combustion chambers, said valve system comprising:

a plurality of intake and exhaust valves for opening and closing intake and exhaust ports of said combustion chambers being provided at said cylinder head portions;

a single valve camshaft operating in connection with said crankshaft, said valve camshaft being rotatably supported at said crankcase portions;

a plurality of valve-operating members for operating said intake and exhaust valves; and

a plurality of oscillating arms operating in connection with said single valve camshaft being connected with said valve-operating members through pull rods disposed respectively on lateral sides of said cylinder banks.

11. The valve system according to claim 10, further comprising a plurality of valve springs, said intake and exhaust valves being energized in a closing direction by said valve springs.

12. The valve system according to claim 10, wherein said engine is a V-block internal combustion engine.

13. The valve system according to claim 10, further comprising a timing gear mechanism, said valve camshafts being rotationally driven by the crankshaft through said timing gear mechanism.

21 14. The valve system according to claim 11, further comprising a timing gear mechanism, said valve camshafts being rotationally driven by the crankshaft through said timing gear mechanism.

15. The valve system according to claim 14, wherein said engine is a V-block internal combustion engine.